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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,581	09/17/2003	Charles E. Biss	270-109	3675

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EXAMINER	
LEE, DIANE I	

ART UNIT	PAPER NUMBER
2876	

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/664,581	BISS ET AL.	
	Examiner	Art Unit	
	D. I. Lee	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-23 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-23 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 9/17/03 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 11/04, 02/05.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-23 are presented for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-13, 16-20, and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zheng et al. [US 5,567,934] in view of Bockholt et al [US 4,488,679].

Re claims 1, 6, 10-13, 19-20, and 22: Zheng a self-aligning structure for use in measuring the quality of an encoded indicium, comprising:

a hollow chamber (a shroud 20) comprising:

a first surface/ section defining a first aperture (a bottom opening 24), the first aperture representing a viewing area of an imager used to obtain an image of the encoded indicium (the shroud having side walls, wherein the lower edges of the each side walls define the bottom opening, see col. 2, lines 59+; col. lines 21+; and see figure 1);

a second surface/section defining a second aperture (a top opening 26), the second aperture configured to support the imager (a CCD based camera 40, which is a two-dimensional array) in a position to obtain the image of the encoded indicium (see col. 3, lines 21+; col. 3, lines 40+ and figures 1-2);

at least one source (an illumination apparatus device 80) of illumination situated within the hollow chamber, the at least one source of illumination configured to illuminate the encoded indicium (see col. 4, lines 3+ and figures 1-2); and

an illumination control (a controller 110) operatively coupled to control/monitor the at least one source of illumination (see col. 6, lines 23+ and figure 4);

the hollow chamber configured to be positioned adjacent the encoded indicium such that,

when the encoded indicium is positioned within the viewing area (see figure 1),

when an imager is supported in the second aperture (see figures 1-2), and

when the at least one illumination source is properly controlled,

the structure is self-aligned and the imager can obtain at least one image of the encoded indicium (see figures 1-2).

Zheng does not disclose the imager measuring the quality of parameter of the encoded indicium and the imager having a linear array of photosensitive element.

Bockholt discloses a code reading system including a hollow chamber (an exterior enclosure) configured to shut out ambient light when the chamber is positioned adjacent the encoded indicium, a light system, an image sensor (such as a photo diode, photo-transistor, or CCD) within the enclosure, an optical sensing means to signal approximate or coarse alignment of the reader with respect to the data field being read, and a switch to activate the entire system once a reader has been properly placed on and aligned over the material to be read Fine

alignment of the code with respect to the reader is handled by firmware contained within the microprocessor system associated with the reader (see col. 2, lines 4+). When the hollow chamber configured to be positioned adjacent the encoded indicium (i.e., when the encoded indicium is positioned within the viewing area), the structure is self-aligned and the imager can obtain at least one image of the encoded indicium from which image the quality of the encoded indicium can be measured based on the satisfactory alignment with the code being read (see col. 4, lines 10+).

It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the imager of the self-aligning structure which image the quality of the encoded indicium is measured based on the satisfactory alignment with the code being read, as taught by Bockholt, in the system of Zheng, in order to improve the code reading and to reduce the any possible errors in reading by the apparatus.

Re claim 2: wherein the hollow chamber is configured to exclude extraneous illumination (such as ambient light) when the imager is present and the hollow chamber is positioned adjacent the encoded indicium (see col. 4, lines 53+ and col. 6, lines 24+),

Re claims 3-5: wherein the hollow chamber is configured to support the imager in a defined position relative to the encoded indicium, e.g., a defined distance and a defined angle (see col. 7, lines 10+).

Re claim 7: wherein the hollow chamber is configured to remain mechanically stable when the imager is position within the second aperture (see col. 3, lines 19+ and figure 1).

Re claims 8-9 and 23: wherein the optical sensor configured to receive illumination from the at least one source of illumination for the purpose of confirming an illumination characteristic (such as an illumination intensity at a selected time) provided by the at least one source of illumination (col. 6, lines 10+).

5. **Claims 14-15 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zheng as modified by Bockholt as applied to claim 10 above, and further in view of Seo et al. [US 5,600,116].** The teachings of Zheng as modified by Bockholt have been discussed above.

Zheng as modified by Bockholt teaches the quality of the encoded indicium can be measured based on the satisfactory alignment with the code being read, but fails to teach the specifics of an analysis module configured to provide a measure quality of a parameter of an encoded indicium undergoing verification to the same parameter of the reference encoded indicium.

Seo teaches an optical data reading device having an analysis module (an image processing unit 20) to perform a predetermined process on the signal (e.g., the light control unit controls the amount of light generated by the light source in accordance with a processing result obtained by the analysis module, thus providing a measure quality of a parameter of an encoded indicium verification based on the amount of the light generated by the light source) (see the abstract; col. 1, line 48-col. 2, line 14; col. 4, lines 21+; and figures 3 and 9). The program for the imaging process and various data are stored in the memory 25 (see col. 4, lines 21+).

It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the analysis module that providing the measure quality of a parameter of an encoded indicium, as taught by Seo, in the teachings of Zheng as modified by Bockholt, in order to provide an illumination arrangement with a uniform and proper brightness to the encoded indicium.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Harris et al. [6,247,645], Roxby et al. [US 5,585,616], and Pidhirny et al. [US 5,786,586] disclose an imaging system with an aligning structure.

Biss et al. [US 6,016,135] discloses a hand held reading device that analyzing a signal resulting from code reading to obtain print quality parameter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. I. Lee whose telephone number is (571) 272-2399. The examiner can normally be reached on Monday through Thursday from 5:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

D. I. Lee
Primary Examiner
Art Unit 2876